R E P O R T R E S U M E S

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PROGRESSIVE CHANGES IN EDUCATIONAL VALUES OVER FOUR YEARS OF COLLEGE. THE PLATTSBURGH STUDY, PROGRESSIVE DEVELOPMENT OF STUDENTS' VALUES, NEEDS AND EDUCATIONAL OBJECTIVES, REPORT 4.

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REPORT NUMBER REP-4 PUB DATE 66
REPORT NUMBER ACCOUNT-29-33-A
EDRS PRICE MF-$0.25 HC-$0.92 21P.

DESCRIPTORS- LONGITUDINAL STUDIES, MORAL VALUES, *PERSONAL VALUES, SOCIAL VALUES, *STUDENT ATTITUDES, *STUDENT DEVELOPMENT, STUDENT INTERESTS, *STUDENT NEEDS, STUDENT REACTION, POE INVENTORY OF VALUES

AS PART OF A LONGITUDINAL STUDY TO DETERMINE IF CHANGES IN A STUDENT'S VALUES, NEEDS, AND EDUCATIONAL OBJECTIVES ARE MORE ORDERLY AND PREDICTABLE THAN PRIOR RESEARCH HAS INDICATED, THE POE INVENTORY OF VALUES WAS ADMINISTERED TO 225 STUDENTS DURING EACH OF THEIR COLLEGE YEARS. THIS INSTRUMENT YIELDS EIGHT SCORES -- (1) AESTHETIC, (2) INTELLECTUAL, (3) MATERIAL, (4) POWER, (5) SOCIAL CONTACT, (6) RELIGIOUS, (7) PRESTIGE, AND (8) HUMANITARIAN. IT WAS FOUND THAT (A) INTELLECTUAL, PRESTIGE, RELIGIOUS, AND SOCIAL CONTACT VALUES SHOWED THE GREATEST CHANGE. (B) SOCIAL CONTACT VALUES SHOWED THE GREATEST DECREASES. (C) SEX DIFFERENCES IN VALUE CHANGE WERE NOT LARGE. (D) ELEMENTARY EDUCATION STUDENTS' VALUES WERE MOST VARIABLE AND SECONDARY EDUCATION STUDENTS' VALUES WERE LEAST VARIABLE. (E) CHANGES IN VALUES TESTED EVERY 14 MONTHS OVER THE FOUR-YEAR PERIOD DID NOT SHOW EQUAL AMOUNTS OF CHANGE FOR EACH YEAR. (F) DIFFERENT VALUE AREAS DO NOT CHANGE AT THE SAME RATE OR IN THE SAME DIRECTION. IT WAS CONCLUDED THAT (1) MORE VALUE CHANGE IS PRESENT DURING THE COLLEGE EXPERIENCE THAN PREVIOUS RESEARCH HAS INDICATED, AND (2) A PARALLEL STUDY WITH NON-COLLEGE INDIVIDUALS IS NECESSARY TO CHECK THE ASSUMPTION THAT THESE VALUE CHANGES ARE A FUNCTION OF COLLEGE EXPERIENCE ALONE. THIS REPORT IS PART OF THE PLATTSBURGH STUDY, "PROGRESSIVE DEVELOPMENT OF STUDENTS' VALUES, NEEDS AND EDUCATIONAL OBJECTIVES." (AW)

SP001387

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THE PLATTSBURGH STUDY

Progressive Development of Students' Values Needs and Educational Objectives

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OFFICE OF INSTITUTIONAL RESEARCH
PROJECT REPORT
STATE UNIVERSITY COLLEGE, PLATTSBURGH, N.Y.

REPORT 4

Progressive Changes in Educational Values Over Four Years of College

Supported in part by the Research Foundation of the State University of New York, Account No. 29-33-A.

ABSTRACT

A paper and pencil inventory of values, the Poe Inventory of Values, was administered at four different times during four years of college to groups of students (N = 225) subdivided by curriculum and sex. This procedure was followed as part of a longitudinal study to explore the hypothesis that changes in values, needs, and educational objectives may be more orderly and predictable than past research has indicated.

This report notes those shifts and changes as indicated within the general research sample. Of the eight different values measured over the four years, more than a chance number of significant changes were noted in four: Intellectual, Prestige, Religious, and Social Contact values. In each case the change was in the direction of less weight being attached to the value area at the end of the four-year educational experience than at the beginning.

Most notable were decrements in Religious values (where six of eight subgroups dropped significantly) and Social Contact values (where each of the eight sub-groups dropped significantly.

Inter-curriculum and inter-sex differences are reported and loss and gains as related to different years of the educational experience are also noted.

Progressive Changes in Values Values Over Four Years of College

This report contains the data and analysis of that portion of the Plattsburgh Study dealing with changes in values, as measured by a paper and pencil inventory, over four years of college.

PROCEDURE

It was the overall hypothesis of the study that changes in values, needs and educational objectives in the student may be greater, more orderly and predictable than past research has indicated and that such changes should be more meaningful when related to the individual student's needs and educational objectives.

Measurement of the selected variables in each of the three areas of values, needs and educational objectives were obtained four times during the class of 1966's four years at State University College at Plattsburgh. The initial measurements were drawn during the first thirty days of the freshman year, or early in October of 1962. Subsequent measurements were then drawn about every fourteen months so that the final data was gathered at the end of the last month of the senior year. Sample size and distribution by sex and curriculum are

noted in Table 1. Although attrition rate among the research sample students varied some from curricula to curricula, no change in proportion of significant size was noted. The original sample represented 56.1 per cent of the entering freshman class while the final research group measured at the end of the senior year represented 48.9 per cent of that class.

TABLE 1

BREAKDOWN OF RESEARCH SAMPLE BY SEX AND CURRICULUM

Sample Group	Total in Initial Sample	Total in Sample At End of 4 Years
Total Class	324	225
Male	97	58
Female	227	167
Liberal Arts Total	58	31
Male	35	18
Female	23	13
Sec. Educ. Total	62	39
Male	34	23
Female	28	16
Gen. Elem. Educ. Total	113	87
Male	28	17
Female	85	70
Nurse-Teacher Total	54	39
Male	--	--
Female	54	39
Home Economics Total	37	29
Male	--	--
Female	37	29

Values were measured by use of the Poe Inventory of Values, a Likert-type scale, originally used in research and normed on college students at the University of Nebraska. This instrument which yields scores on eight value areas patterned

after Spranger-Allport* (Aesthetic, Intellectual, Material, Power, Social Contact, Religious, Prestige and Humanitarian) has some advantages over the more traditional Allport-Vernon-Lindzey scale. The eight areas operate independently of each other so low scores, for example, are possible in all eight areas at once. It has norm tables based purely on a college population and the actual wording of the items is oriented somewhat toward the student, thus, possibly, helping to alleviate any general negative reaction to the testing situation.

RESULTS

With eight value areas, eight subgroups and four different measurements drawn for each contingency, analysis becomes a complicated procedure. In general, the pattern of analysis follows this procedure: Each value area is examined for shifts and changes over the four year period; major shifts and changes during any of the fourteen-month periods are also noted. Finally, differences between subgroups are reported where they are significant.

Aesthetic Value:

Although there was a slight trend toward an increase in this value area, only one subgroup, the Nurse-Teachers (hereafter referred to as SNT) showed a significant, $p =< .05$, 1 to 4 year increment (See Table II, III, IV, for results). Analysis of variance over all four years yielded no significant F ratios for any subgroup.

*See appendix for definitions of value terms.

Cross-sex raw scores cannot be directly compared due to different norms for each sex but resulting percentiles indicating position in the sex-norm group can be compared. In this value area, the only significant sex difference occurs in the General Elementary (hereafter referred to as GE) where male percentile ranks are significantly higher, $p = < .05$, than females for each of the four years.

The only cross curriculum difference over the four year period is found in years 1 and 2 where the Liberal Arts (hereafter referred to as LA) females are significantly higher, $p = < .01$, than the SNT females. By year 3 increments in SNT scores have caused the difference to drop below a significant level.

The Junior year appears to be the period where greatest change occurs. All groups except Home Economics (hereafter referred to as HE) females show increments for that time. The strength of the increment was not found to be significantly related to or different for either sex or curriculum.

Intellectual Value:

Intellectual values dropped for each of the subgroups when comparing year 1st and 4th year measurements. In all but two cases, LA males and Secondary Education (hereafter referred to as SE) males, the decrements were significant, $p = < .01$. Analysis of variance considering all four measurements were significant, $p = < .01$, for three of the female groups, SE, SNT, and HE.

No intracurriculum sex differences were significant until the fourth year at which time males were significantly higher, $p = < .01$, in both the SE and LA curricula. The only inter-curriculum difference of note also occurred in the fourth year when HE females were the lowest group, scoring significantly lower, $p = < .05$, than SE, LA, and SNT females.

The greatest shift generally occurred during the Junior year, as this value dropped, followed by a slight leveling and increment in the Senior year.

Material Values:

In general there was little 1st to 4th year change with the exception being the GE females where 1-4 year comparison yielded a significant, $p = < .01$, decrement, and analysis of variance considering all four measurements also showed significant, $p = < .01$, and consistent decrements.

The various groups showed some tendency to shift during the Sophomore and Junior years but regression trends during the Senior year toward the initial valuing level erased any such shifts.

Some intracurriculum sex differences were observed. GE females were significantly higher, $p = < .01$, than GE males at initial measurement. Their positions had reversed by year 4, $p = < .05$. SE females were also significantly higher, $p = < .01$, than male curriculum counterparts at initial measurement. By the last measurement, however, identical mean scores and low variances caused the two to be indistinguishable from each other. The reversal phenomenon noted in the GE curriculum was also present with LA students, but existing differences

TABLE II

DIRECTION OF SIGNIFICANT* VALUE CHANGES OVER FOUR YEARS

GROUP \ VALUE	AESTHETIC	INTELLECTUAL	MATERIAL	POWER	SOCIAL CONT
GEN. ELEM. FEMALES	--	DOWN	DOWN	--	DOWN
GEN.ELEM. MALES	--	DOWN	--	--	DOWN
HOME ECON. FEMALES	--	DOWN	--	--	DOWN
LIB. ARTS FEMALES	--	DOWN	--	--	DOWN
LIB. ARTS MALES	--	--	--	--	DOWN
SEC. EDUC. FEMALES	--	DOWN	--	--	DOWN
SEC. EDUC. MALES	--	--	--	--	DOWN
NURSE-TEACHER FEMALES	UP	DOWN	--	UP	DOWN

* $p = < .05$ or better

TABLE III

YEAR & DIRECTION OF GREATEST* VALUE CHANGE

GROUP \ VALUE	AESTHETIC	INTELLECTUAL	MATERIAL	POWER	SOCIAL CONT
GEN. ELEM. FEMALES	2 UP	2 DOWN	1 DOWN	1 UP	2 DOWN
GEN. ELEM. MALES	1 UP	2 DOWN	2 DOWN	1 DOWN	2 DOWN
HOME ECON. FEMALES	3 UP	2 DOWN	3 DOWN	1 UP	2 DOWN
LIB. ARTS FEMALES	3 UP	2 DOWN	2 DOWN	3 UP	2 DOWN
LIB. ARTS MALES	2 UP	3 UP	2 DOWN	3 UP	2 DOWN
SEC. EDUC. FEMALES	2 DOWN	2 DOWN	2 DOWN	3 DOWN	2 DOWN
SEC. EDUC. MALES	3 UP	2 DOWN	3 UP	3 UP	2 DOWN
NURSE-TEACHER FEMALES	3 UP	2 DOWN	3 UP	1 UP	2 DOWN

*Not Necessarily Statistically Significant

TABLE II

TION OF SIGNIFICANT* VALUE
HANGES OVER FOUR YEARS

TUAL	MATERIAL	POWER	SOCIAL CONT.	RELIGIOUS	PRESTIGE	HUMANITARIAN
	DOWN	--	DOWN	DOWN	DOWN	--
	--	--	DOWN	DOWN	--	--
	--	--	DOWN	DOWN	DOWN	--
	--	--	DOWN	DOWN	DOWN	--
	--	--	DOWN	--	--	UP
	--	--	DOWN	--	--	--
	--	--	DOWN	DOWN	--	--
	--	UP	DOWN	DOWN	--	--

TABLE III

ECTION OF GREATEST* VALUE CHANGE

CTUAL	MATERIAL	POWER	SOCIAL CONT.	RELIGIOUS	PRESTIGE	HUMANITARIAN
OWN	1 DOWN	1 UP	2 DOWN	1 DOWN	1 DOWN	3 DOWN
OWN	2 DOWN	1 DOWN	2 DOWN	3 DOWN	2 DOWN	3 UP
OWN	3 DOWN	1 UP	2 DOWN	1 DOWN	2 DOWN	2 DOWN
OWN	2 DOWN	3 UP	2 DOWN	1 DOWN	2 DOWN	1 DOWN
UP	2 DOWN	3 UP	2 DOWN	1 DOWN	1 DOWN	2 UP
OWN	2 DOWN	3 DOWN	2 DOWN	1 DOWN	2 DOWN	1 UP
OWN	3 UP	3 UP	2 DOWN	3 DOWN	1 UP	3 DOWN
OWN	3 UP	1 UP	2 DOWN	3 DOWN	1 DOWN	3 DOWN

gnificant

TABLE IV
SUBGROUP RANKING ON EACH VARIABLE
BASED ON PERCENTILE SCORES
YEARS 1 AND 4

VALUE	AESTHETIC		INTELLECTUAL		MATERIAL		POWER		SOC.CONT.	
YEAR / GROUP	1	4	1	4	1	4	1	4	1	4
GEN.ELEM.FEMALES	6	7	7	7	1	8	4	4	1.5	7
GEN.ELEM. MALES	4	1	5	5	8	5	3	7	1.5	3
HOME ECON. FEMALES	7	8	8	8	3	6.5	6	6	8	4.5
LIB. ARTS FEMALES	3	4	3.5	3	5	2	8	8	5	6
LIB. ARTS MALES	1	3	3.5	1	2	1	2	2	4	1
SEC. EDUC. FEMALES	5	5	1	4	4	3.5	1	5	7	4.5
SEC. EDUC. MALES	2	2	2	2	7	3.5	5	1	3	2
NURSE-TEACHER FEMALES	8	6	6	6	6	6.5	7	3	6	8

TABLE V
SUBGROUP PERCENTILE SCORES*
FOR YEARS 1 AND 4

VALUE	AESTHETIC		INTELLECTUAL		MATERIAL		POWER		SOC.CONT.	
YEAR / GROUP	1	4	1	4	1	4	1	4	1	4
GEN.ELEM.FEMALES	52	55	49	26	60	33	36	37	51	16
GEN.ELEM. MALES	63	73	58	34	43	43	38	32	51	21
HOME ECON. FEMALES	52	53	39	17	54	42	33	33	29	18
LIB.ARTS FEMALES	63	68	63	40	51	48	34	34	40	17
LIB.ARTS MALES	78	71	63	62	59	55	39	46	46	28
SEC. EDUC. FEMALES	56	63	68	34	54	44	41	36	32	18
SEC. EDUC. MALES	64	71	64	53	44	44	36	47	49	26
NURSE TEACH.FEMALES	43	57	50	32	48	42	30	44	33	14

*Based on Original Norms For P.I.V., Separately Obtained For Each Sex

TABLE IV

OUP RANKING ON EACH VARIABLE
ASED ON PERCENTILE SCORES
YEARS 1 AND 4

LECTUAL		MATERIAL		POWER		SOC.CONT.		RELIGIOUS		PRESTIGE		HUMANITARIAN	
4		1	4	1	4	1	4	1	4	1	4	1	4
7		1	8	4	4	1.5	7	5	2	5	8	3	4
5		8	5	3	7	1.5	3	1.5	1	1	2	4	6
8		3	6.5	6	6	8	4.5	6	6	3	5	7	8
5	3	5	2	8	8	5	6	8	8	4	7	6	7
5	1	2	1	2	2	4	1	7	4.5	6	3	8	5
	4	4	3.5	1	5	7	4.5	4	3	7	4	5	1
	2	7	3.5	5	1	3	2	1.5	4.5	2	1	1.5	2.5
	6	6	6.5	7	3	6	8	3	7	8	6	1.5	2.5

TABLE V

UBGROUP PERCENTILE SCORES*
FOR YEARS 1 AND 4

ELLECTUAL		MATERIAL		POWER		SOC.CONT.		RELIGIOUS		PRESTIGE		HUMANITARIAN	
1	4	1	4	1	4	1	4	1	4	1	4	1	4
9	26	60	33	36	37	51	16	27	24	41	22	75	59
8	34	43	43	38	32	51	21	46	15	59	43	56	49
9	17	54	42	33	33	29	18	22	8	44	27	39	39
3	40	51	48	34	34	40	17	14	3	43	23	48	41
3	62	59	55	39	46	46	28	18	9	40	34	33	54
8	34	54	44	41	36	32	18	31	14	39	31	60	67
4	53	44	44	36	47	49	26	46	9	51	47	71	63
0	32	48	42	30	44	33	14	31	7	34	27	71	63

eparately Obtained For Each Sex

were not significant.

Few intercurriculum differences were noted. At the start of the four-year educational experience, LA males were significantly higher, $p = < .05$, than GE males. This difference disappeared at the second measurement and did not reoccur. At the end of the 4th year, GE females were lower, $p = < .05$, than SNT females.

Power Values:

With an increment from year 1 to year 4, SNT females were the only curriculum group showing significant, $p = < .05$, change. Some intracurriculum sex differences appeared. LA males scored significantly higher, $p = < .01$, than LA females at each measurement. SE males scored significantly higher, $p = < .01$, than SE females at year 4.

SNT females scored significantly higher, $p = < .05$, than LA females at year 4. No other significant trends, differences or changes were noted.

Social Contact Values:

This value area manifested a great deal of change. Each group showed a significant, $p = < .01$, drop in value scores when years 1 and 4 were compared. Analyses of variance considering all four measurement points also yielded significant F ratios, $p = < .01$, for each group. No intercurriculum differences were found. In general, scores dropped rapidly during the first three years with evidence of greatest change during the Junior year. In all but one group, GE males, some regression towards original level was found during the Senior

year but not of great enough magnitude to prevent the resulting final level from being significantly lower than that originally held.

No significant sex differences were obtained though it may be noted that in each applicable group, males consistently scored higher than females at each measurement point.

Religious Values:

Religious values showed a great amount of change, second only to Social Contact values. Six of the eight groups showed significant drops when comparing year 1 with year 4: GE males, $p = <.05$; GE females, $p = <.01$; SE males, $p = <.001$; LA females, $p = <.01$; HE females, $p = <.05$; SNT females, $p = <.001$. Analyses of variance considering all four measurements yielded significant F ratios for four groups: SE male, $p = <.01$; GE males, $p = <.05$; GE females, $p = <.05$; SNT females, $p = <.01$.

A considerable number of intracurriculum sex differences were seen. GE males were significantly higher, $p = <.01$, than GE females until the last measurement when they become indistinguishable. This relationship was repeated in the SE curriculum. LA males maintained a significantly, $p = <.05$, higher score than LA females throughout the four years. In general, males tended to score higher than their female curriculum counterpart in all but the two fourth year exceptions mentioned above.

Inter-curriculum differences are varied. LA females scored lower, $p = <.01$, than both GE females and SE females at all points. LA females also scored significantly lower than SNT females during the first three years but not at the final measurement.

Prestige Values:

This value area showed mixed results. A general trend to lower scores by each group was noted during the first three measurements but from that point on both incremental and decremental changes were seen. GE, LA, and HE females all showed significantly, $p = <.05$, lower 4th year scores in the 1 to 4 comparison. Both the LA and the GE females data yield significant F ratios, $p = <.05$, in an analysis of variance considering all four measurements. GE males are significantly higher, $p = <.05$, than any other male curriculum group at each of the first three measurements but are indistinguishable from SE males at the final point. GE males are consistently significantly higher than GE females, $p = <.01$; SE males are significantly higher, $p = <.01$, than SE females only at the first and last testing. All male groups are higher than any female group at the final testing but no intra-sex curriculum differences are noted for either sex.

Humanitarian Values:

Valuing in this area remained almost constant through the four years. The only exception being the LA males who showed a 1 to 4 increment significant at the $p = <.05$ level. Some intra-sex curriculum differences were noted. LA and HE females were consistently lower, $p = <.05$, than other female groups.

In both the SE and the LA curriculum, sex trends were in opposite directions. SE males decremented, SE females incremented. LA males incremented and LA females decremented.

Amount of change was not significant, but the two sexes were statistically distinguishable in each curriculum (LA, $p = < .01$; SE, $p = < .05$) at the first and last measurements.

CONCLUSIONS AND SUMMARY

Based on this research sample's performance several broad statements can be made. 1) Different value areas do not change either at the same rate or in the same direction. 2) Groups of students in different curricula do not show parallel value changes. 3) Changes in values over a four-year educational experience do not show equal amounts of change for different years of experience. 4) Some values do not seem to change during the college experience.

Such generalizations should be made, of course, with the acknowledged reservation that the performance of these students may not be a typical performance of either Plattsburgh students nor necessarily representative of students in other institutions. Associated studies are currently examining both possibilities. So far, preliminary evidence would seem to indicate that this research sample is not an atypical Plattsburgh class. Cross campus validation is not sufficiently complete for any conclusions to be drawn in that respect.

More specifically, the above generalizations can be further analyzed in this way:

Differences between value areas: Intellectual, Social Contact, and Religious values show the most change. Consistently

the change is toward less intense valuing in each area. In Report #3, of the Plattsburgh Study, Relationship of Freshman Student Values to Parental Values, it was noted that with the exception of Religious values, the students tended to hold more intense values than parents. This was especially true in the Social Contact area. The measured loss may reflect some tendency to regress toward a cultural or population mean, though percentile rankings show Plattsburgh students to be quite low as compared to their academic peers of the norming sample. On the Religious value scale, Plattsburgh students were dramatically lower than their parents and below the mean scores of similar students at their initital testing. Fourth year scores show an even greater drop in percentile ranks (Table V) with the highest group being only at the 24th percentile rank.

It is interesting to note that while Intellectual and Social Contact values seemed to change most often during the Junior year, Religious values showed most changes in either the Freshman or Senior years. No particular apparent curriculum-related phenomenon is present to explain this.

Of equal interest with the strongly changing values are those areas where little change was noted. Aesthetic, Material, Power and Humanitarian values showed little 1-4 movement (Table II). Examination of the norm table reveals that in these areas Plattsburgh students clustered more about the mean score and evidenced little change in relationship to such norms. Such absence of 1 to 4 year change shoudl not be interpreted to mean that values are static during this time.

Indeed, graphic portrayal of the progressive measurements has revealed a characteristic labeled the "teepee" effect by the researchers. That is, measurements in many cases showed incremental (or decremental) trends for a year or two, then reversed themselves so that significant changes were not always reportable (see Figure 1).

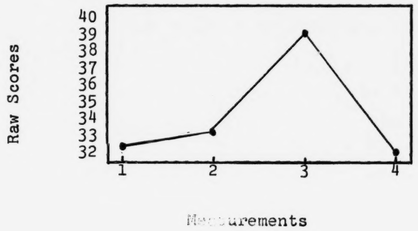

Figure 1

Example of "Teepee" Effect, SE Females, Aesthetic Value.

No single explanation is present for the expressed tendency of Plattsburgh students to show less than average intensity of values. Particularly, there is no apparent reason for the low expressed Religious values. The student body has large proportions of Jewish and Roman Catholic students who seem to show "average" or typical identification with their religious heritage. The campus does not seem to have either a manifest or latent tendency toward religious rebellion or rejection.

One very important aspect has not been investigated. No parallel examination of non-college students from similar sub-

cultures has been available, hence it is impossible to say that the changes (or lack of them) are a function of the college experience totally or in part. Certainly one should consider the possible role of maturation functioning apart from the educational experience in one instance, and interacting in another.

No noticeable change in variance is present for any group vs. any value area.

Differences between sexes: Sex differences in the direction of value change do not seem to be large. In general male groups seem to shift in about the same directions in a given value area as their female-curriculum counterparts. Some differences were noted but these tended to be exceptions. Relative male-female position also remained fairly constant. In those cases where ordinal position changed from year 1 to 4, the sexes were generally so close initially as to be largely indistinguishable and variance overlaps was large enough to cast doubt on any inferences drawn from the change.

Perhaps the one exception which should be noted is the Religious value area where at year 4 the two sexes score almost identically, but at year 1, males were significantly higher.

Differences between curricula: It can be noted that female groups showed more significant changes than male groups in the LA and GE groups. However, SE males and females both showed two significant shifts. Finally, only female groups showed

significant changes in the Prestige value area, (3 of 5), while two male groups (LA and SE) sere the only groups not showing change in the Intellectual value area.

GE females and SNT females showed more changes, 5 out of 8 value areas, than any other curriculum group. HE and LA females showed shifts in 4 out of 8 value areas. LA males, SE females, SE males changed least with but 2 out of 8 possible shifts. Over all 27 out of 64 possible contingencies showed shifts and in each value area where more than one group changed significantly, the direction of the two or more shifts were always the same.

It would seem safe to say that on the basis of this sample, GE students' values are most susceptible to change and SE students' values least susceptible to change over the four year period. Other curriculum groups fall in between with every group showing change in at least one-fourth of the value areas.

Conclusions and Recommendations for Further Research:

Conclusions directly relevent to education are difficult to draw from such variety of results. It certainly can be said that more value change during the college experience is present than has been supposed from previous research. Failure to repeatedly measure value status in past designs has resulted in progressive changes being overlooked when initial and final scores have not proven to be significantly different. Indications of rather strong fluctuations present in this sample, from year to year, would seem to indicate the dynamic nature of the valuing experience.

Further longitudinal study is currently underway to examine post-baccalaureate values changes. At the same time, cross validation studies currently in process should shed light on the validity of the phenomena reported here.

Noting that 24 out of 27 significant value shifts were decrements it could be hypothesized that initial value scores tend to reflect the intensity with which adolescent and just post-adolescent students react to value eliciting stimuli and that the decrements result from the leveling effect of maturation and experience. Earlier research results comparing these same students' values with those of their parents, noting the students scores being much higher than parents, would certainly be in line with such reasoning. Further exploratory research is needed in this direction.

As was mentioned previously, a parallel study with non-college individuals is necessary to check any assumptions about these value changes being a function of collegiate experience alone. At the same time, differential maturational and experiential factors might be observed.

Finally, it is suggested that longitudinal studies over the years of college experience should involve non-American and non-Western cultures for the purpose of separating out the general cultural factor involved. Preliminary plans are being prepared for such a study, including English, Jordanese, Indian, and Japanese students.

APPENDIX

DEFINITION OF VALUES TERMS

Aesthetic: In this area, the emphasis is on beauty, form and sensory patterns of an artistic nature.

Intellectual: This area emphasizes knowledge, facts, theories, and cognition.

Material: This area refers to the emphasis on monetary gain, property, and objects with utility.

Power: The emphasis here is on authority, influence and control over others.

Social Contact: In this area is found an emphasis on sociability, gregariousness, and affiliation.

Religious: This value involves emphasis on worship, reverence, and spiritual aspects of life.

Prestige: This area involves the desire for social position, distinction, and status.

Humanitarian: The emphasis is on altruism in this area, helpfulness and working with and for the welfare of others.